



BOSCH

Invented for life

AC Commercial Product Catalog

Simply Smart

Our water-source heat pumps are easy to install, highly efficient heating and cooling solutions for retrofit and new construction applications.



boschheatingandcooling.com



Bosch Group of Companies

The Bosch group of companies is a leading global supplier of technology and services in the areas of Automotive, Industrial Technology, Consumer Goods and Building Technology. The company was founded in Stuttgart, Germany, in 1886 and presently has more than 360 subsidiaries and is represented in over 150 countries.

In the U.S., Canada and Mexico, the Bosch group of companies manufactures and markets automotive original equipment and after-market solutions, industrial drives and control technology, power tools, security and communication systems, packaging technology, thermotechnology, household appliances, and software solutions. Bosch products and services are designed to improve quality of life by providing innovative and beneficial solutions. In this way, the company offers technology worldwide that is “Invented for life.” Additional information is available online at boschheatingandcooling.com and boschusa.com.

About **Bosch**

Bosch Thermotechnology in North America

Bosch Thermotechnology is a leading source of high quality water heating and comfort systems. The company offers gas tankless, electric whole house and point-of-use water heaters, Bosch and Buderus floor-standing and wall mounted boilers, Bosch and FHP geothermal, water-source and air-source systems as well as controls and accessories for all product lines. Bosch Thermotechnology is committed to being Simply Smart by offering products that work together as integrated systems that enhance quality of life in an ultra-efficient and environmentally friendly manner. For more information, visit boschheatingandcooling.com

Bosch Water-Source Heat Pumps: Made in the U.S.A.

Bosch FHP heat pumps are made by highly trained and skilled workers in our factory based in Fort Lauderdale, Florida. They are manufactured with rigorous standards and factory testing ensuring high efficient operation over the life of the unit. Bosch’s ISO 9001 and ISO 14001 certified facilities provide consistent quality in every unit built.



Bosch FHP Water-Source Heat Pumps
Made in the U.S.A.



Unit Types	WATER-TO-AIR - 1/2 THROUGH 6 TONS					WATER-TO-WATER			CONSOLE		WATER-TO-AIR - 6 TO 60 TONS	
	LV MODEL	EP MODEL	ES MODEL	LM MODEL	WT MODEL	WW MODEL	CA MODEL	EC MODEL	MC MODEL	CA MODEL	EC MODEL	MC MODEL
Models	High Efficiency, Single Stage	Premium Efficiency, Single Stage	High-Efficiency, Two-Stage	Premium Efficiency, Two-Stage	High Efficiency, Two-Stage	High Efficiency, Single & Two-Stage	High Efficiency, Single-Stage	High Efficiency, Two-Stage	High Efficiency, Two & Four-Stage	High Efficiency, Single-Stage	High Efficiency, Two-Stage	High Efficiency, Two & Four-Stage
Application	High Efficiency, Single Stage	Premium Efficiency, Single Stage	High-Efficiency, Two-Stage	Premium Efficiency, Two-Stage	High Efficiency, Two-Stage	High Efficiency, Single & Two-Stage	High Efficiency, Single-Stage	High Efficiency, Two-Stage	High Efficiency, Two & Four-Stage	High Efficiency, Single-Stage	High Efficiency, Two-Stage	High Efficiency, Two & Four-Stage
Sizes (tons)	.5, .75, 1, 1.25, 1.5, 2, 2.5, 3, 3.5, 4, 5, 6	.5, .75, 1, 1.25, 1.5, 2, 2.5, 3, 3.5, 4, 5, 6	2, 3, 4, 5, 6	2, 3, 4, 5, 6	2, 3, 4, 5, 6	Single-Stage: 10, 15, 17.5 Two-Stage: 10, 20, 30, 35	.75, 1, 1.25, 1.5	HZ: 6, 8, 10, 12.5, 15, 20 VT: 6, 8, 10, 12.5, 15, 17.5, 20, 25, 30	30, 40, 50, 60			
AHRI Ratings (13256-1)												
Water Loop (WLHP)	4.3 - 5.3 COP 12.2 - 15.4 EER	5.1 - 6.0 COP 14.9 - 18.2 EER	4.4 - 5.4 COP 14.0 - 17.5 EER	4.4 - 5.4 COP 14.0 - 17.5 EER	4.1 - 4.7 COP 12.4 - 14.7 EER	4.4 - 4.5 COP 13.2 - 13.8 EER	4.3 - 4.5 COP 12.2 - 13.4 EER	4.2 - 5.6 COP 13.0 - 16.0 EER	4.7 - 5.4 COP 13.1 - 16.1 EER			
Ground Loop (GLHP)	3.2 - 3.7 COP 14.1 - 17.7 EER	3.6 - 4.3 COP 17.5 - 21.7 EER	3.5 - 4.0 COP 15.7 - 24.5 EER	3.8 - 4.7 COP 18.5 - 32.0 EER	2.8 - 3.2 COP 14.5 - 22.1 EER	3.0 - 3.2 COP 15.1 - 15.9 EER	3.2 - 3.2 COP 14.2 - 15.5 EER	3.2 - 4.2 COP 14.2 - 17.9 EER	-			
Ground Water (GWHP)	-	4.3 - 5.2 COP 22.4 - 28.8 EER	4.0 - 4.6 COP 19.0 - 30.0 EER	4.5 - 5.2 COP 23.1 - 37.0 EER	3.4 - 3.8 COP 18.8 - 25.7 EER	3.7 - 3.8 COP 19.1 - 20.7 EER	3.6 - 3.9 COP 18.2 - 21.5 EER	3.8 - 5.0 COP 18.3 - 24.0 EER	-			
Refrigerant	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A			R-410A
Compressor	Rotary (.5-1.25T) Reciprocating (1.5-3.5T) Scroll (4-6T)	Rotary (.5-1.5T) Scroll (2-6T)	Scroll (2-6T)	Scroll	Scroll	Scroll	Rotary	Reciprocating (6-8T) Scroll (10-30T)	Scroll			Scroll
Blower Motor	PSC, Constant Torque ECM	PSC, Constant Torque & Constant Airflow ECM	PSC, Constant Torque & Constant Airflow ECM	Constant Torque & Constant Airflow ECM	-	-	PSC	Belt Drive	Belt Drive			Belt Drive
Cabinet Configurations	Vertical, Horizontal Counterflow/Downflow, Split System	Vertical, Horizontal Counterflow/Downflow	Vertical, Horizontal Downflow	Vertical, Horizontal, Split System	Vertical	Vertical - Single, Vertical - Double	Console Standard, Console Extended Optional	Vertical, Horizontal	Vertical, Horizontal			Vertical, Horizontal
Water Circuit Options	Flow Proving Switch, 2-Position Motorized Valve, Measureflow Valve	Flow Proving Switch, 2-Position Motorized Valve, Measureflow Valve	Flow Proving Switch	Flow Proving Switch, (package unit only) 2-Position Motorized Valve, Measureflow Valve	Flow Proving Switch	Flow Proving Switch	-	Flow Proving Switch	Flow Proving Switch			Flow Proving Switch
Controls	UPM with Thermostat input DDC Optional	UPM with Thermostat input DDC Optional	UPM with Thermostat input DDC Optional	UPM with Thermostat input DDC Optional	UPM with Thermostat input Unit Mounted Controller Optional DDC Optional	UPM with Thermostat input Unit Mounted Controller Optional DDC Optional	UPM with Thermostat input Unit Mounted Controller Optional DDC Optional	UPM with Thermostat input DDC Optional	UPM with Thermostat input DDC Optional			UPM with Thermostat input DDC Optional
Coil and Reheat Options	Al Fin/Copper Tube Air Coil, Coated Air Coil, Hot Gas Reheat, Waterside Economizer, CuNi Water Coil	Al Fin/Copper Tube Air Coil, Coated Air Coil, Hot Gas Reheat, Waterside Economizer, CuNi Water Coil	Al Fin/Copper Tube Air Coil, Coated Air Coil, Hot Gas Reheat, Waterside Economizer, CuNi Water Coil	Al Fin/Copper Tube Air Coil, Coated Air Coil, Hot Gas Reheat, CuNi Water Coil	CuNi Water Coil	CuNi Water Coil	Al Fin/Copper Tube Air Coil, Coated Air Coil, CuNi Water Coil	Al Fin/Copper Tube Air Coil, Coated Air Coil, Hot Gas Reheat, CuNi Water Coil	Al Fin/Copper Tube Air Coil, Coated Air Coil, Hot Gas Reheat, CuNi Water Coil			Al Fin/Copper Tube Air Coil, Coated Air Coil, Hot Gas Reheat, CuNi Water Coil
Air Filter	Optional 2" MERV-8 or MERV-13	Optional 2" MERV-8 or MERV-13	Optional 2" MERV-8 or MERV-13	Optional 2" MERV-8 or MERV-13	-	-	1/2" Cleanable Aluminum Mesh	Optional 2" MERV-8	Optional 4" MERV-8			Optional 4" MERV-8
Cabinet Insulation	Matted Fiberglass Insulation, Closed Cell Foam Optional	Matted Fiberglass Insulation, Closed Cell Foam Optional	Matted Fiberglass Insulation, Closed Cell Foam Optional	Matted Fiberglass Insulation, Closed Cell Foam Optional	Matted Fiberglass Insulation	Matted Fiberglass Insulation	Matted Fiberglass Insulation	Matted Fiberglass Insulation, Closed Cell Foam Optional	Matted Fiberglass Insulation			Matted Fiberglass Insulation

BOSCH COMMERCIAL



Packaged Units & Split Systems



LV Model | Water-to-Air Packaged Unit

- ▶ .5 to 6 tons
- ▶ Up to 16.9 EER (GLHP);
Up to 5.3 COP (WLHP)
- ▶ Option-rich, compact size
- ▶ Unique sound package designed to eliminate vibration and reduce unwanted noise



LV Model | Water-to-Air Split System

- ▶ 1.5 to 6 tons
- ▶ Up to 15.9 EER (GLHP);
Up to 4.4 COP (WSHP)
- ▶ Space-saving flexible configuration, option-rich, lower operating costs, and quiet comfort



EP Model | Water-to-Air Packaged Unit

- ▶ .5 to 6 tons
- ▶ Up to 21.7 EER (GLHP);
Up to 6.0 COP (WSHP)
- ▶ Industry-leading single-stage high efficiency with a variety of options



ES Model | Water-to-Air 2-Stage Packaged Unit

- ▶ 2 to 6 tons
- ▶ Up to 24.5 EER (GLHP) and 5.4 COP (WSHP) Part Load; Up to 18.7 EER (GLHP) and 5.0 COP (WSHP) Full Load
- ▶ Two-stage scroll compressor
- ▶ ECM constant airflow blower motor
- ▶ One of the industry's most ultra-efficient units providing powerful performance and enhanced features that provide the best all around value



LM Model | Water-to-Air 2-Stage Packaged Unit

- ▶ 2 to 6 tons
- ▶ Up to 32.0 EER (GLHP) and 6.5 COP (WLHP) Part Load; Up to 22.0 EER (GLHP) and 5.6 COP (WLHP) Full Load
- ▶ Two capacity scroll compressor
- ▶ ECM Motor
- ▶ Best-in-class efficiency and comfort



LM Model | Water-to-Air Split System

- ▶ 2 to 6 tons
- ▶ Up to 26.4 EER (GLHP) and 6.1 COP (WSHP) Part Load; Up to 19.3 EER (GLHP) and 5.3 COP (WSHP) Full Load
- ▶ Flexible Configurations, and ideal for locations where space is limited, with exceptionally quiet operation
- ▶ Fully featured
- ▶ Two-stage scroll compressor
- ▶ ECM Motor
- ▶ Best-in-class efficiency and comfort



Please note:

The "FHP" name has now become a product delineation of Bosch commercial heat pumps. The entire heat pump line of Bosch quality products are made in the USA and rigorously tested to the highest standards at our Ft. Lauderdale, Florida facility.

FAMILY OF PRODUCTS



Water-to-Water Units



WT Model | Water-to-Water 2-Stage Packaged Unit (Chiller/Boiler)

- ▶ 2 to 6 tons
- ▶ Up to 22.1 EER (GLHP);
Up to 4.7 COP (WSHP) Part Load
- ▶ Wide range of voltages
- ▶ Near limitless options for hydronic systems
- ▶ Two-stage compressor and high operating temperatures for best-in-class performance
- ▶ Two-stage reverse cycle chiller water heater designed specifically to meet high-end hydronic systems

WW Model | Water-to-Water 2-Stage Packaged Unit (Chiller/Boiler)



- ▶ 10 to 35 tons
- ▶ Up to 22.1 EER (GLHP);
Up to 4.7 COP (WSHP) Part Load
- ▶ Single-stage scroll compressor or dual scroll compressors
- ▶ Two-stage refrigerant circuits (20 to 35 tons) for water-cooled modular reverse cycle chiller applications



Console Unit

CA Model | Console Unit

- ▶ .75 to 1.5 tons
- ▶ High Efficiency
- ▶ Compact size and efficient to provide comfort where space and access are limited
- ▶ Decentralized room terminal unit that is field connected to a closed-circuit piping loop

Large Units



EC Model | Water-to-Air Packaged Unit & Split System Large Capacity

- ▶ 6 to 30 tons
- ▶ Up to 24.5 EER (GLHP);
Up to 5.6 COP (WSHP)
- ▶ Dual refrigeration system
- ▶ High efficiency unit with increased flexibility in installation and availability of applications



MC Model | Water-to-Air Packaged Unit

- ▶ 30 to 60 tons
- ▶ Up to 16.1 EER (WSHP);
Up to 5.4 COP (WSHP)
- ▶ Ultra Efficiency with value added features and multi-levels of capacity
- ▶ Scroll compressors, variable air volume and 100% outside air capability providing flexibility, performance and quiet operation

LV Model | Water-to-Air Packaged Unit

Standard features:

- ▶ Two sided 1" R/A filter rack with 1" MERV-4 filter
- ▶ Unit Protection Module (UPM)
- ▶ Uncoated air coil made of copper tubes and aluminum fins
- ▶ PSC direct-drive blower motor
- ▶ Stainless steel drain pan
- ▶ Removable inlet blower ring
- ▶ R-410A refrigerant; single stage compressor
- ▶ Dual refrigerant freeze sensors - water and air side
- ▶ Copper coaxial heat exchanger
- ▶ Horizontal package units include hanging brackets⁽¹⁾
- ▶ Condensate overflow sensor switch
- ▶ Lockout circuit and 50 VA transformer (size 007-042), 75 VA transformer (size 048-070)
- ▶ Duct flange connections for 1.5" supply and 1" return air
- ▶ Floating compressor base
- ▶ Schrader access ports
- ▶ Capillary tube expansion device
- ▶ Galvanized steel cabinet
- ▶ .5", 1.5lbs/ft³ Dual density fiberglass insulation

Notes: For units ordered with cupro-nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper. To remove all copper in the water loop, contact Applications Engineering about the marine option.

(1) Shipped loose inside of unit.

High Efficiency Replacement

This option-rich offering is available in .5 to 6 ton size range and meets or exceeds ASHRAE 90.1 efficiency standards. Outfitted with the latest in compressor, blower motor and heat transfer technologies, this product performs extremely well in both water loop and geothermal applications.

Quiet Operation

The LV Model comes standard with a unique sound package designed to eliminate vibration transmission to the cabinet and reduce unwanted noise in the occupied space. The product is designed with blower wheels that help keep discharge air noise to a minimum.

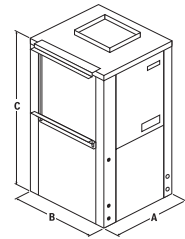
Cabinet Configuration Flexibility

The LV horizontal cabinets come standard with blower systems that are easily reconfigured on the job site. The blower discharge arrangement can be easily changed from end to straight discharge or vice versa.

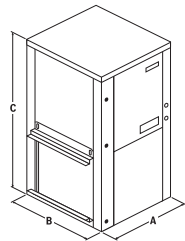


The option-rich, water-to-air LV offers one of the smallest cabinets in the industry, making it a great choice for replacement and new construction projects.

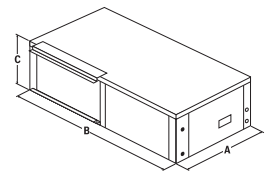
VERTICAL CABINET		CABINET DIMENSIONAL DATA		
		A (WIDTH)	B (DEPTH)	C (HEIGHT)
LV007-012	in	19.0	19.0	24.3
	cm	48.3	48.3	61.6
LV015-018	in	21.5	21.5	32.2
	cm	54.6	54.6	81.9
LV024, 030, 041	in	21.5	21.5	39.3
	cm	54.6	54.6	99.7
LV036, 042	in	21.5	26.0	43.3
	cm	54.6	66.0	109.9
LV048-060	in	24.0	32.5	43.3
	cm	61.0	82.6	109.9
LV070	in	26.0	33.3	58.3
	cm	66.0	84.5	148.0



Vertical



Counterflow



Horizontal

HORIZONTAL CABINET		CABINET DIMENSIONAL DATA		
		A (WIDTH)	B (DEPTH)	C (HEIGHT)
LV007-012	in	19.0	33.0	11.5
	cm	48.3	83.8	29.2
LV015-030	in	22.0	43.0	17.0
	cm	55.9	109.2	43.2
LV036, 042	in	22.0	54.5	19.0
	cm	55.9	138.4	48.3
LV048-060	in	25.0	54.5	21.0
	cm	63.5	138.4	53.3
LV070	in	25.0	65.0	21.0
	cm	63.5	165.1	53.3

Environmentally Friendly

These highly efficient units not only reduce your operating cost, but play their part in reducing carbon dioxide emissions, a leading cause of global warming.

Quality & Reliability

Rigorous factory testing virtually assures hassle free operation from the start, while over 40 years of experience in designing heat pumps for commercial applications are your assurance of a state of the art quality product. Our ISO 9001-2008 and ISO 14001-2004 certified facilities provide consistent quality in every unit we build.

Options | LV Model Packaged Unit

Factory installed:

- ▶ .5" Closed-cell foam insulation
- ▶ 75VA Transformer (007-042)
- ▶ 100VA Transformer (048-070)
- ▶ 2" MERV-13 Four sided filter rack⁽¹⁾
- ▶ 2" MERV-8 Four sided filter rack⁽²⁾
- ▶ 2-Position motorized water valve
- ▶ 3-Point DDC expansion module
- ▶ Automatic water flow valve
- ▶ Blower monitor relay
- ▶ Boilerless control
- ▶ Circulating pump (external)
- ▶ Compressor blanket
- ▶ Compressor monitor relay
- ▶ DDC 560 Controller with multiple protocol (BACnet, Modbus, N2)⁽³⁾
- ▶ DDC with LonWorks card⁽³⁾
- ▶ Disconnect switch, 40A external
- ▶ DUOGUARD coated evaporator coil
- ▶ ECM Constant airflow fan motor⁽⁴⁾⁽⁵⁾
- ▶ ECM Constant torque fan motor⁽⁴⁾
- ▶ Energy Management System (EMS) relay
- ▶ Extended range (geothermal)
- ▶ Fan/pump interlock relay
- ▶ Fire alarm relay/dual power
- ▶ Flow proving switch
- ▶ Hot gas bypass
- ▶ Hot gas reheat (on/off)⁽³⁾⁽⁶⁾
- ▶ Marine package⁽⁷⁾⁽⁸⁾
- ▶ Phase protection monitor⁽⁹⁾
- ▶ Quiet package⁽¹⁰⁾
- ▶ Schrader port⁽¹¹⁾
- ▶ Status LED
- ▶ Straight cool (no reversing valve)
- ▶ TXV
- ▶ Unit wiring for 208 Volt
- ▶ Water side economizer package⁽³⁾

- (1) ECM Motor must be selected. Includes access panel. Not available with economizer option.
- (2) Includes access panel. Not available with economizer option.
- (3) 75 VA transformer is required. Standard filter rack only with economizer.
- (4) Not available on 575 V units.
- (5) Requires a neutral wire on 460V units. Not available on 575V units.
- (6) TXV or extended range required on hot gas reheat option.
- (7) Special; will require extended lead time.
- (8) Marine option adds water connections directly on water coil, oversized openings in cabinet for piping directly to connections, and a 2" drain pan. Extended range and CuNi coil must be selected with this option.
- (9) Available only on 3-phase units.
- (10) Closed Cell Foam Insulation with Compressor Blanket.
- (11) Unit comes standard with dual schrader ports for charging/servicing. This option is for an additional port for the connection of a field-supplied/ installed water regulating valve.

MODEL	FLUID FLOW RATE	AHRI/ANSI 13256-1 PERFORMANCE DATA							
		ENTERING WATER TEMPERATURES							
		86 °F		68 °F		77 °F		32 °F	
		WATER LOOP				GROUND LOOP			
		CAPACITY AND EFFICIENCY DATA – PSC MOTOR (STANDARD)							
		COOLING CAPACITY (WLHP)	EER (WLHP)	HEATING CAPACITY (WLHP)	COP (WLHP)	COOLING CAPACITY (GLHP)	EER (GLHP)	HEATING CAPACITY (GLHP)	COP (GLHP)
LV007	2.0	6,100	12.20	7,800	5.30	6,800	15.10	4,900	3.40
LV009	2.5	8,200	12.40	9,900	4.70	8,700	14.60	5,740	3.20
LV012	3	10,900	12.20	13,000	4.30	11,800	14.10	8,700	3.20
LV015	4	14,200	12.80	16,100	4.40	14,200	14.60	11,300	3.30
LV018	5.0	19,400	13.40	22,200	4.60	21,200	15.80	14,300	3.50
LV024	6	23,400	13.40	26,600	4.40	25,000	15.50	17,000	3.40
LV030	7	29,200	13.20	33,400	4.30	31,000	14.70	20,900	3.30
LV036	9	37,900	14.70	41,800	4.60	39,900	16.90	26,900	3.50
LV041	9	39,500	13.10	44,600	4.30	41,200	14.30	29,400	3.20
LV042	10	40,000	13.70	46,300	4.30	42,600	14.80	31,000	3.30
LV048	12	45,900	13.00	56,400	4.30	48,800	14.90	35,400	3.40
LV060	15	57,900	13.00	67,200	4.30	60,100	14.10	46,900	3.20
LV070	16	64,000	13.30	72,800	4.40	66,400	15.00	50,800	3.40
ECM MOTOR (OPTION)									
LV015	4	13,700	13.90	15,500	4.40	14,400	16.20	10,700	3.30
LV018	5.0	19,700	14.40	21,900	4.80	21,500	15.90	14,100	3.70
LV024	6	23,800	14.50	26,200	4.60	25,400	16.80	16,700	3.60
LV030	7	30,000	15.00	32,800	4.60	31,600	17.50	20,400	3.40
LV036	9	38,200	15.40	41,400	4.70	40,200	17.70	26,500	3.60
LV041	9	40,500	13.60	43,700	4.40	42,200	15.90	28,500	3.60
LV042	10	40,900	14.10	45,300	4.40	43,500	16.30	30,100	3.50
LV048	12	46,800	14.20	55,600	4.50	49,600	16.30	34,600	3.60
LV060	15	59,000	14.30	66,400	4.30	61,100	16.40	46,200	3.30
LV070	16	65,200	14.60	71,800	4.60	67,600	16.60	50,000	3.50

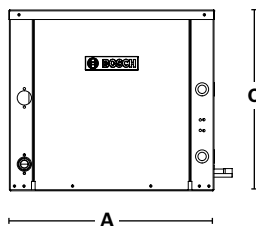
LV Model | Water-to-Air Split System

Standard features:

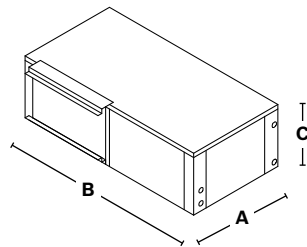
- ▶ Two sided 1" R/A filter rack with 1" MERV-4 filter
- ▶ Unit Protection Module (UPM)
- ▶ Uncoated air coil made of copper tubes and aluminum fins
- ▶ ECM constant torque fan motor
- ▶ Stainless steel drain pan
- ▶ Removable inlet blower ring
- ▶ R-410A Refrigerant; single stage compressor
- ▶ Dual refrigerant freeze sensors - water and air side
- ▶ Copper coaxial heat exchanger
- ▶ Lockout circuit and 50 VA transformer
- ▶ Duct flange connections for supply and return air
- ▶ Floating compressor base
- ▶ Schrader access ports
- ▶ Geothermal-ready with extended range
- ▶ Galvanized steel cabinet
- ▶ .5", 1.5lbs/ft³ Dual density fiberglass insulation



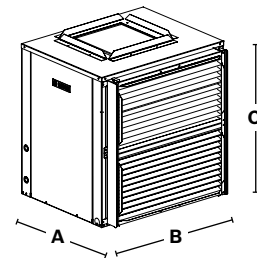
The option-rich LV Split System was created to provide maximum flexibility. Available in vertical or horizontal configurations (air handling section) from 1.5 through 6 tons, this system is designed to meet your every need. Consisting of two sections, these units can be placed remotely to allow for installation in locations where space is limited or sound is an issue.



Condensing Section



Air Handler Section (Horizontal)



Air Handler Section (Vertical)

MODEL	CONDENSING SECTION DIMENSIONS (IN INCHES)			MODEL	HORIZONTAL AIR HANDLER DIMENSIONS (IN INCHES)			MODEL	VERTICAL AIR HANDLER DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)		A (WIDTH)	B (DEPTH)	C (HEIGHT)		A (WIDTH)	B (DEPTH)	C (HEIGHT)
LV018	21.50	21.50	19.00	LV018	22.00	43.00	17.00	LV018	21.50	21.50	21.62
LV024	21.50	21.50	19.00	LV024	22.00	43.00	17.00	LV024	21.50	21.50	21.62
LV030	21.50	21.50	19.00	LV030	22.00	43.00	17.00	LV030	21.50	21.50	21.62
LV036	21.50	26.00	19.00	LV036	22.00	54.50	19.00	LV036	21.50	26.00	25.62
LV042	21.50	26.00	19.00	LV042	22.00	54.50	19.00	LV042	21.50	26.00	25.62
LV048	24.00	32.50	21.00	LV048	25.00	54.50	21.00	LV048	24.00	32.50	25.62
LV060	24.00	32.50	21.00	LV060	25.00	54.50	21.00	LV060	24.00	32.50	25.62
LV070	26.00	33.30	21.00	LV070	25.00	65.00	21.00	LV070	33.30	26.00	33.62

Notes: All dimensions within +/- 0.125.

1" filter rack extends 1.23" beyond the side of the unit. 2" filter rack extends 2.89" beyond the side of the unit.

The 2" filter rack is 4-sided with a filter access door on each end and can accept either a 1" or 2" filter.

Options | LV Model Split System

Factory Installed - Condenser Section:

- ▶ .5" closed-cell foam insulation
- ▶ 2-Position motorized water valve
- ▶ Automatic water flow valve
- ▶ Boilerless control
- ▶ Compressor blanket
- ▶ Compressor monitor relay
- ▶ Disconnect switch, 40A
- ▶ Fan/pump interlock relay
- ▶ Flow proving switch
- ▶ Phase protection monitor⁽¹⁾
- ▶ Status LED

(1) Available only on 3-phase units.

(2) Includes access panel.

Factory Installed - Air Handler/Fan Coil Section:

- ▶ .5" Closed-cell foam insulation
- ▶ 75VA Transformer
- ▶ 100VA Transformer
- ▶ 2" MERV-13 Four-sided filter rack⁽²⁾
- ▶ 2" MERV-8 Four-sided filter rack⁽²⁾
- ▶ Condensate overflow sensor switch
- ▶ Disconnect switch, 40A external
- ▶ DuoGuard coated evaporator coil
- ▶ ECM Constant airflow motor⁽³⁾
- ▶ Energy Management System (EMS) relay
- ▶ Unit wiring for 208 Volt

(3) Requires a neutral wire on 460V units. Not available on 575V units.



AHRI/ANSI 13256-1 PERFORMANCE DATA								
MODEL	WATER LOOP HEAT PUMP				GROUND LOOP HEAT PUMP			
	COOLING 86 ° F		HEATING 68 ° F		COOLING 77 ° F		HEATING 32 ° F	
	CAPACITY BTUH	EER BTUH/W	CAPACITY BTUH	COP	CAPACITY BTUH	EER BTUH/W	CAPACITY BTUH	COP
LV018	18,900	13.3	21,100	4.4	20,400	15.7	13,800	3.5
LV024	22,600	13.1	24,900	4.3	23,900	15.0	16,200	3.3
LV030	26,400	13.0	29,600	4.3	27,900	14.3	19,500	3.2
LV036	35,000	13.8	37,000	4.3	37,300	15.9	24,900	3.5
LV042	38,600	13.0	41,600	4.3	40,900	14.8	27,300	3.2
LV048	43,300	13.6	51,800	4.3	45,100	15.4	33,500	3.5
LV060	54,300	13.0	64,000	4.3	57,400	14.9	44,400	3.2
LV070	62,100	13.6	70,400	4.3	64,200	15.6	47,900	3.3

Note: Ratings based upon AHRI/ANSI 13256-1 with 1" disposable filter.

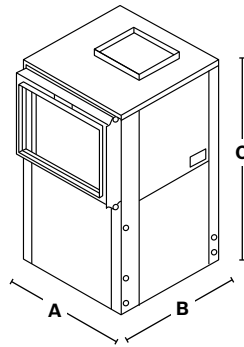
EP Model | Water-to-Air Packaged Unit

Standard features:

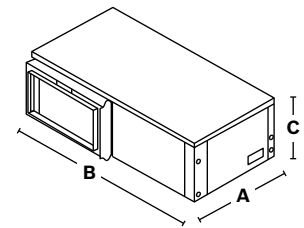
- ▶ Schrader access ports
- ▶ Deluxe 2" four-sided R/A filter rack with 1" MERV-4 filter and access panel⁽¹⁾
- ▶ Unit Protection Module (UPM)
- ▶ Uncoated air coil made of copper tubes and aluminum fins
- ▶ Dual refrigerant freeze sensors
- ▶ TXV Expansion device
- ▶ Stainless steel drain pan
- ▶ Removable inlet blower ring
- ▶ Copper coaxial heat exchanger
- ▶ Horizontal package units include hanging brackets⁽²⁾
- ▶ Condensate overflow sensor switch
- ▶ 75VA Transformer
- ▶ Duct flange connections for supply and return
- ▶ ECM Constant torque blower motor (EP015 and higher)
- ▶ PSC Motor (EP012 and lower)
- ▶ Floating compressor base
- ▶ Galvanized steel cabinet
- ▶ .5", 1.5lbs/ft³ Dual density fiberglass insulation
- ▶ R-410A Refrigerant; single refrigerant circuit



Industry-leading single-stage efficiencies, standard features, and a variety of options - providing energy efficient solutions to accommodate your building requirements.



Vertical



Horizontal

Note: For units ordered with cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.

xxC - Copper coaxial condenser
xxN - Cupro-Nickel coaxial condenser

(1) For 2" field-supplied filters, remove spring clips prior to connecting return ductwork.

(2) Shipped loose inside unit.

(3) Total unit height is 22.75 with base rails for EP030 - EP070.

MODEL	VERTICAL UNIT DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)
EP007	21.75	21.75	32.75
EP009	21.75	21.75	32.75
EP012	21.75	21.75	32.75
EP015	21.75	21.75	39.25
EP018	21.75	21.75	39.25
EP024	21.75	26.25	47.25
EP030	24.25	33.50	47.25
EP036	24.25	33.50	47.25
EP042	26.25	33.50	58.25
EP048	26.25	33.50	58.25
EP060	26.25	33.50	66.25
EP070	26.25	33.50	66.25

MODEL	HORIZONTAL UNIT DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)
EP007	21.75	43.25	16.75
EP009	21.75	43.25	16.75
EP012	22.25	45.25	19.75
EP015	22.25	45.25	19.75
EP018	22.25	45.25	19.75
EP024	26.25	54.75	22.00 ⁽³⁾
EP030	30.25	68.25	22.00 ⁽³⁾
EP036	30.25	68.25	22.00 ⁽³⁾
EP042	30.25	79.00	22.00 ⁽³⁾
EP048	30.25	79.00	22.00 ⁽³⁾
EP060	30.25	89.25	22.00 ⁽³⁾
EP070	30.25	89.25	22.00 ⁽³⁾

Notes: All dimensions in inches unless otherwise noted. All dimensions within +0.125". Specifications subject to change without notice.

Options | EP Model Packaged Unit

Factory installed:

- ▶ .5" Closed-cell foam insulation
- ▶ 100VA Transformer
- ▶ 2" MERV-13 Filter⁽¹⁾
- ▶ 2" MERV-8 Filter
- ▶ 2-Position motorized water valve
- ▶ Automatic water flow valve
- ▶ Blower monitor relay
- ▶ Boilerless control
- ▶ Comfort alert module⁽²⁾
- ▶ Compressor blanket
- ▶ Compressor monitor relay
- ▶ DDC 560 Controller with multiple protocol (BACnet, Modbus, N2)
- ▶ DDC with LonWorks card
- ▶ Disconnect switch, 40A⁽³⁾
- ▶ DUOGUARD coated evaporator coil
- ▶ ECM constant airflow fan motor⁽⁴⁾
- ▶ Electric heat - 5 kW⁽⁵⁾
- ▶ Electric heat - 10 kW⁽⁵⁾
- ▶ Electric heat - 15 kW⁽⁵⁾⁽⁶⁾
- ▶ Electric heat - 20 kW⁽⁵⁾⁽⁶⁾
- ▶ Energy Management System (EMS) relay
- ▶ Extended range (geothermal)⁽⁷⁾
- ▶ Fire alarm relay/dual power
- ▶ Flow proving switch
- ▶ Heat recovery package⁽⁸⁾
- ▶ Hot gas bypass
- ▶ Hot gas reheat (modulating)⁽⁹⁾
- ▶ Hot gas reheat (on/off)
- ▶ Phase protection monitor⁽¹⁰⁾
- ▶ Pump/valve relay
- ▶ Quiet package⁽¹¹⁾
- ▶ Straight cool
- ▶ Unit wiring for 208 Volt
- ▶ Water circulating pump⁽⁴⁾⁽¹²⁾
- ▶ Waterside economizer⁽¹³⁾

- (1) Size 015 and larger.
- (2) Voltage must be 208-230/1/60
- (3) Not available with electric heat.
- (4) Requires a neutral wire on 460V units.
- (5) Available on 208-230/1/60 and 208-230/3/60 units. Not available with hot gas reheat.
- (6) Not available on HZ straight through config.
- (7) Extended range option includes additional schrader valve.
- (8) Available on 208-230/1/60 and 208-230/3/60 units. Not available with hot gas reheat. Comes with internal circulating pump.
- (9) Less controls.
- (10) Available on 3-phase units only.
- (11) Closed cell foam insulation with compressor blanket.
- (12) Special - contact applications for support.
- (13) Waterside economizer option comes with a 2-sided 1" filter rack.

ASHRAE / AHRI / ISO 13256-1. ENGLISH (I-P) UNITS												
MODEL	WATER LOOP HEAT PUMP				GROUND WATER HEAT PUMP				GROUND LOOP HEAT PUMP			
	COOLING 86 °F		HEATING 68 °F		COOLING 59 °F		HEATING 50 °F		COOLING 77 °F		HEATING 32 °F	
	CAPACITY BTUH	EER BTUH/W	CAPACITY BTUH	COP	CAPACITY BTUH	EER BTUH/W	CAPACITY BTUH	COP	CAPACITY BTUH	EER BTUH/W	CAPACITY BTUH	COP
EP WITH PSC MOTOR												
EP007	6,800	15.7	8,800	5.7	8,400	25.1	7,000	4.9	7,400	18.5	5,100	3.6
EP009	9,000	16.2	11,200	5.5	10,500	25.5	9,000	4.5	9,500	19.3	6,800	3.6
EP012	12,200	14.9	16,500	5.1	114,600	22.7	13,000	4.3	13,000	17.5	10,000	3.6
EP WITH ECM MOTOR (CONSTANT TORQUE OR CONSTANT AIR FLOW)												
EP015	15,200	17.5	17,500	5.6	17,000	28.8	13,000	4.6	16,200	20.6	11,000	3.9
EP018	19,500	16.4	21,300	5.3	21,300	25.6	17,700	4.5	20,500	19.0	14,800	3.8
EP024	24,500	18.2	28,500	5.7	28,400	28.1	23,700	4.6	26,000	21.1	18,000	4.0
EP030	27,000	16.6	31,000	5.9	31,700	27.0	25,000	5.2	28,500	19.4	20,500	4.3
EP036	36,000	17.2	41,000	5.6	40,200	25.9	34,400	4.9	37,500	19.7	26,000	4.1
EP042	40,600	18.2	42,400	6.0	45,000	25.7	35,000	5.1	42,200	21.7	26,800	4.1
EP048	47,400	17.2	50,000	5.3	52,900	26.1	40,500	4.3	49,500	20.0	33,400	3.7
EP060	60,400	16.2	71,500	5.7	66,500	24.1	56,700	4.9	61,500	18.5	47,000	4.2
EP070	68,000	16.2	86,000	5.6	71,400	22.4	71,400	5.0	70,500	18.5	56,500	4.2

Note: Tabulated performance data is at noted water temperatures and entering air conditions of 80.6°F DB/66.2°F WB at ARI/ISO 13256-1 rated CFM.

ES Model | Water-to-Air 2-Stage Packaged Unit

Standard features:

- ▶ Uncoated air coil made of copper tubes and aluminum fins
- ▶ Schrader access ports
- ▶ Unit Protection Module (UPM)
- ▶ Duct flange connections
- ▶ Condensate overflow sensor
- ▶ Extended range with TXV, insulated copper coaxial heat exchanger and schrader valve
- ▶ Stainless steel drain pan
- ▶ Deluxe 2" four-sided R/A filter rack with 1" MERV-4 filter and access panel⁽¹⁾
- ▶ Dual refrigerant freeze sensors - water and air side
- ▶ R-410A Refrigerant; single refrigerant circuit
- ▶ Horizontal package units include hanging brackets⁽²⁾
- ▶ Floating compressor base
- ▶ Copeland Ultratech™ two-stage unloading scroll compressor
- ▶ ECM Constant airflow fan motor⁽³⁾
- ▶ 75VA Transformer
- ▶ Galvanized steel cabinet
- ▶ .5", 1.5lbs/ft³ Dual density fiberglass insulation

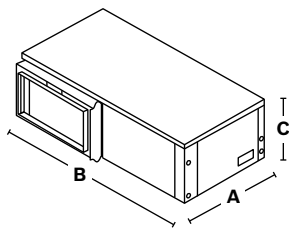


The ES 2-stage, water-to-air heat pumps offer high efficiency, value added features and dual capacity with standard features like a two speed scroll compressor and a ECM constant airflow fan motor, giving you the flexibility, performance and quiet operation needed to exceed the expectations of your clients.

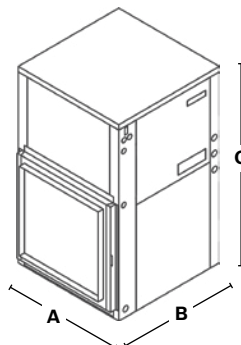
xxC - Copper coaxial condenser
xxN - Cupro-Nickel coaxial condenser

- (1) For 2" field-supplied filters, remove spring clips prior to connecting return ductwork.
- (2) Shipped loose inside unit.
- (3) 460/4/60 unit requires neutral wire.

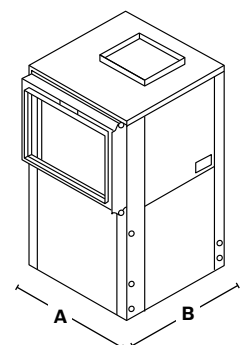
Notes: For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.



Horizontal



Counterflow



Vertical

MODEL	HORIZONTAL UNIT DIMENSIONS (IN INCHES)			MODEL	COUNTERFLOW UNIT DIMENSIONS (IN INCHES)			MODEL	VERTICAL UNIT DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)		A (WIDTH)	B (DEPTH)	C (HEIGHT)		A (WIDTH)	B (DEPTH)	C (HEIGHT)
ES025	26.00	54.50	21.75	ES025	21.50	26.00	47.25	ES025	21.50	26.00	47.25
ES035	26.00	54.50	21.75	ES035	21.50	26.00	47.25	ES035	21.50	26.00	47.25
ES049	30.00	68.00	21.75	ES049	24.00	32.75	47.25	ES049	24.00	32.75	47.25
ES061	30.00	68.00	21.75	ES061	26.00	33.25	51.25	ES061	26.00	33.25	51.25
ES071	30.00	78.00	21.75	ES071	26.00	33.25	58.25	ES071	26.00	33.25	58.25

Notes: All dimensions in inches unless otherwise noted. All dimensions within +0.125". Specifications subject to change without notice. For each configuration, add relevant dimensional information and drawings for units with Waterside Economizer.

Options | ES Model Packaged Unit

Factory installed:

- ▶ .5" Closed cell foam insulation
- ▶ 100VA Transformer
- ▶ 2" MERV-13 Filter
- ▶ 2" MERV-8 Filter
- ▶ 2-Position motorized water valve
- ▶ Automatic water flow valve
- ▶ Blower monitor relay
- ▶ Boilerless control
- ▶ Comfort alert module⁽¹⁾
- ▶ Compressor blanket
- ▶ Compressor monitor relay
- ▶ DDC 560 Controller with multiple protocol (BACnet, Modbus, N2)
- ▶ DDC with LonWorks card
- ▶ Disconnect switch, 40A⁽²⁾
- ▶ Electric heat - 5 kW⁽³⁾
- ▶ Electric heat - 10 kW⁽³⁾
- ▶ Electric heat - 15 kW⁽³⁾⁽⁴⁾
- ▶ Electric heat - 20 kW⁽³⁾⁽⁴⁾
- ▶ Energy Management System (EMS) relay
- ▶ Fan/pump interlock relay
- ▶ Fire alarm relay/dual power
- ▶ Flow proving switch
- ▶ Heat recovery package⁽³⁾⁽⁵⁾
- ▶ Hot gas bypass
- ▶ Hot gas reheat (on/off)
- ▶ Phase protection monitor⁽⁶⁾

- ▶ Quiet package⁽⁷⁾
- ▶ Straight cool
- ▶ Tin plated evaporator coil⁽⁸⁾
- ▶ Unit wiring for 208 Volt
- ▶ Water circulating pump
- ▶ Water side economizer⁽⁹⁾

- (1) Single phase units only.
 (2) Not available with electric heat.
 (3) Available on 208-230/1/60 and 208-230/3/60 units. Not available with hot gas reheat.
 (4) Not available on HZ straight through config.
 (5) Comes with internal circulating pump.
 (6) Available only on 3-phase units.
 (7) Closed cell foam insulation with compressor blanket.
 (8) Aluminum fins are uncoated.
 (9) The standard ES filter rack is not available with the WSE option. The filter rack will be a 1", 2-sided, C-channel rack without an access panel.



AHRI/ANSI 13256-1 PERFORMANCE DATA														
MODEL	LOAD	GPM	WATER LOOP HEAT PUMP				GROUND WATER LOOP HEAT PUMP				GROUND LOOP HEAT PUMP			
			COOLING 86 °F		HEATING 68 °F		COOLING 86 °F		HEATING 68 °F		COOLING 77 °F		HEATING 32 °F	
			CAPACITY BTUH	EER BTUH/W	CAPACITY BTUH	COP	CAPACITY BTUH	EER BTUH/W	CAPACITY BTUH	COP	CAPACITY BTUH	EER BTUH/W	CAPACITY BTUH	COP
ES025	Part	6	18800	17.5	20500	5.1	21000	30.0	18000	4.6	20000	24.5	15500	4.0
	Full	6	26000	16.0	30000	5.0	29000	24.0	25000	4.6	27500	18.7	19000	3.8
ES035	Part	9	24000	17.0	27000	5.3	27000	28.0	22500	4.5	27000	24.5	20500	4.0
	Full	9	36000	14.6	43000	4.8	42000	21.6	36000	4.2	38000	17.2	28000	3.8
ES049	Part	12	34000	16.0	39000	5.4	38000	24.0	32000	4.6	36000	21.8	28500	4.0
	Full	12	48000	12.6	58000	4.8	54000	19.0	48000	4.2	49000	15.5	38000	3.6
ES061	Part	14	42000	17.0	48000	5.4	48000	26.0	40000	4.6	45000	23.5	36500	4.0
	Full	14	60000	14.0	72000	4.7	68000	19.7	61000	4.3	62000	15.7	49000	3.6
ES071	Part	18	51000	15.8	55000	4.4	57000	25.2	47000	4.0	56000	21.8	42000	3.7
	Full	18	72000	14.5	80000	4.5	77000	19.6	68000	4.2	74000	16.3	53000	3.5

Note: Ratings based upon AHRI/ANSI 13256-1 with 1" disposable filter.

LM Model | Water-to-Air 2-Stage Packaged Unit

Standard features:

- ▶ Uncoated air coil made of copper tubes and aluminum fins
- ▶ Schrader access ports
- ▶ Floating compressor base
- ▶ Copeland Ultratech™ two-stage unloading scroll compressor
- ▶ Horizontal package units include hanging brackets⁽¹⁾
- ▶ Deluxe 2" four-sided R/A filter rack with 1" MERV-4 filter and access panel⁽²⁾
- ▶ R-410A Refrigerant; single refrigerant circuit
- ▶ ECM Constant torque fan motor
- ▶ Unit Protection Module (UPM)
- ▶ 75VA Transformer
- ▶ Condensate overflow sensor and dual refrigerant freeze sensors
- ▶ Stainless steel drain pan
- ▶ Extended range with TXV, insulated copper coaxial heat exchanger and schrader valve
- ▶ Galvanized steel cabinet
- ▶ .5", 1.5lbs/ft³ Dual density fiberglass insulation



Introducing the LM Model, a highly efficient packaged water source heat pump and the ideal solution for high performance buildings. This model offers our customers best-in-class comfort, efficiency and noise levels along with a wide range of available features and options. The LM Model incorporates a number of features and options that benefit our customers and allow the specifying engineer to maximize LEED® credits on high performance projects.

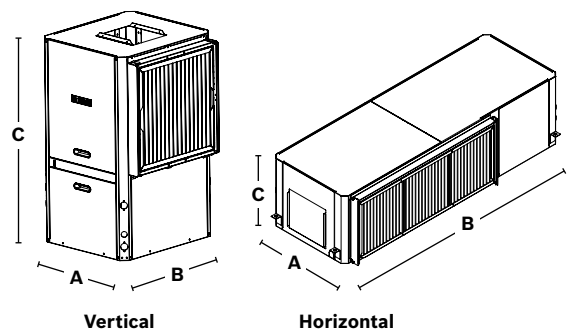
Notes: For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.

xxC - Copper coaxial condenser
xxN - Cupro-Nickel coaxial condenser

- (1) Shipped loose inside unit.
- (2) For 2" field-supplied filters, remove the spring clips prior to connecting return air ductwork.



MODEL	DIMENSIONS (IN INCHES)					
	VERTICAL			HORIZONTAL		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)	A (WIDTH)	B (DEPTH)	C (HEIGHT)
LM024	24.0	27.4	44.6	25.1	64.1	19.7
LM036	25.8	33.4	52.6	28.0	76.0	22.7
LM048	25.8	33.4	52.6	28.0	76.0	22.7
LM060	27.0	33.4	62.0	28.0	83.0	22.7
LM070	27.0	33.4	62.0	28.0	83.0	22.7



Options | LM Model Packaged Unit

Factory installed:

- ▶ .5" Closed cell foam insulation
- ▶ 2" MERV-13 Filter
- ▶ 2" MERV-8 Filter
- ▶ 2-Position water motorized water valve
- ▶ Automatic water flow valve
- ▶ Comfort alert module⁽¹⁾
- ▶ Compressor blanket
- ▶ Compressor monitor relay
- ▶ Current sensor (blower)
- ▶ DDC 560 Controller with multiple protocol (BACnet, Modbus, N2)
- ▶ DDC with LonWorks card
- ▶ Disconnect switch, 40A external⁽²⁾⁽³⁾
- ▶ DUOGUARD coated evaporator coil
- ▶ ECM Constant airflow fan motor⁽⁴⁾
- ▶ Electric heat - 5 kW⁽⁵⁾
- ▶ Electric heat - 10 kW⁽⁵⁾
- ▶ Electric heat - 15 kW⁽⁵⁾
- ▶ Electric heat - 20 kW⁽⁵⁾
- ▶ Energy Management System (EMS) relay
- ▶ Flow proving switch
- ▶ Heat recovery package⁽⁶⁾
- ▶ Hot gas reheat (on/off)
- ▶ Phase protection monitor⁽⁷⁾

- ▶ Pump/valve relay
- ▶ Quiet package⁽⁸⁾
- ▶ Smart start⁽⁹⁾
- ▶ Status LED
- ▶ Unit wiring for 208 Volt
- ▶ Water circulating pump

- (1) Voltage must be single phase.
 (2) Not available with electric heat.
 (3) Non-fused disconnect.
 (4) Requires a neutral line on 460V.
 (5) Not available with hot gas reheat or straight through config. Available on 208-230/1/60 and 208-230/3/60 units.
 (6) Available on 208-230/1/60 and 208-230/3/60 units. Not available with hot gas reheat. Comes with internal circulating pump.
 (7) Available only on 3-phase units.
 (8) Closed cell foam insulation with compressor blanket.
 (9) Voltage must be 208-230/1/60.



MODEL	FLUID FLOW RATE	ARI/ISO 13256-1 PERFORMANCE DATA											
		ENTERING WATER TEMPERATURES											
		WATER LOOP (WLHP)				GROUND WATER (GWHP)				GROUND LOOP (GLHP)			
		86°F		68°F		59°F		50°F		77°F		32°F	
		CAPACITY AND EFFICIENCY DATA											
		COOLING CAPACITY	EER	HEATING CAPACITY	COP	COOLING CAPACITY	EER	HEATING CAPACITY	COP	COOLING CAPACITY	EER	HEATING CAPACITY	COP
LM024													
Part Load	6.0	18500	18.9	21200	6.5	21700	33.6	16700	5.1	21000	28.1	14400	4.4
Full Load	6.0	25500	17.4	29200	5.6	29000	26.5	23500	4.9	26600	19.9	18000	4.1
LM036													
Part Load	9.0	29000	22.2	31000	6.5	32600	37.0	25200	5.2	31900	32.0	22400	4.7
Full Load	9.0	39000	19.0	42800	5.6	43300	28.0	35900	5.1	40800	22.0	28400	4.3
LM048													
Part Load	12.0	36700	18.9	40900	6.2	42000	33.8	33700	5.2	39900	27.8	29800	4.5
Full Load	12.0	49200	16.6	56100	5.3	55300	25.3	46300	4.7	51300	19.3	36900	4.0
LM060													
Part Load	15.0	47500	18.7	53600	5.8	53300	31.2	44300	4.8	51600	26.5	39800	4.4
Full Load	15.0	63800	17.0	73300	5.2	70200	24.4	60300	4.6	65100	18.9	48000	3.9
LM070													
Part Load	18.0	55200	17.8	64900	5.7	60800	28.5	52900	4.8	60300	25.4	46900	4.3
Full Load	18.0	71600	16.3	84000	5.1	78700	23.1	70000	4.5	73700	18.5	55300	3.8

LM Model | Water-to-Air Split System



Standard features:

Air Handler Section

- ▶ Uncoated air coil made of copper tubes and aluminum fins
- ▶ Horizontal units include hanging brackets
- ▶ Deluxe 2" four-sided R/A filter rack with 1" MERV-4 filter and access panel⁽¹⁾
- ▶ ECM Constant airflow fan motor
- ▶ 75VA Transformer
- ▶ Condensate overflow sensor
- ▶ Air coil freeze refrigerant sensor
- ▶ Stainless steel drain pan
- ▶ Galvanized steel cabinet
- ▶ 1/2", 1.5lbs/ft³ Dual density fiberglass insulation

The fully featured LM Split Systems include a standard two-stage scroll compressor and an ECM (Electronically Commutated Motor) for best-in-class efficiency and comfort.

Condensing Section

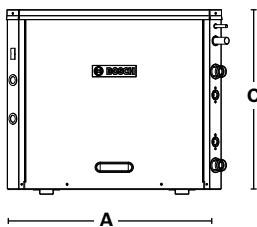
- ▶ Schrader access ports
- ▶ Floating compressor base
- ▶ Copeland Ultratech™ two-stage unloading scroll compressor
- ▶ R-410A Refrigerant; single refrigerant circuit
- ▶ Unit Protection Module (UPM)
- ▶ Extended range with TXV and insulated copper coaxial heat exchanger
- ▶ Pre-painted steel cabinet
- ▶ Closed-cell foam insulation
- ▶ Coax coil refrigerant freeze sensor

xxC - Copper coaxial condenser
xxN - Cupro-Nickel coaxial condenser

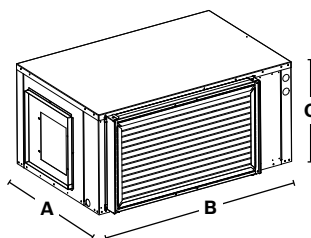
Notes: Electric heat is not available on horizontal units with -XXS (straight through) configuration.
For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.

(1) For 2" field-supplied filters, remove spring clips prior to removing return air ductwork.

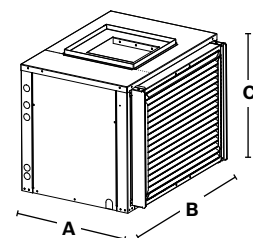
MODEL	HORIZONTAL AIR HANDLER DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)
LM024	33.00	26.00	21.75
LM036	33.00	26.00	21.75
LM048	38.50	30.00	21.75
LM060	38.50	30.00	21.75
LM070	49.50	30.00	21.75



Condensing Section



Horizontal Air Handler Section



Vertical Air Handler Section

MODEL	CONDENSING SECTION DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)
LM024	24.00	27.40	21.50
LM036	24.00	27.40	21.50
LM048	24.00	27.40	21.50
LM060	27.00	33.40	23.30
LM070	27.00	33.40	23.30

MODEL	VERTICAL AIR HANDLER DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)
LM024	21.50	26.00	25.75
LM036	21.50	26.00	25.75
LM048	24.00	32.75	25.75
LM060	26.00	33.25	27.75
LM070	26.00	33.25	35.75

Notes: Overall unit dimensions do not include filter rack or duct flanges.
All dimensions in inches unless otherwise noted. All dimensions within $\pm 0.125"$. Specifications subject to change without notice.
1" filter rack extends 1.23" beyond the side of the unit. 2" filter rack extends 2.89" beyond the side of the unit.
The 2" filter rack is 4 sided with a filter access door on each end and can accept either a 1" or 2" filter.

Options | LM Model Split System

Condenser section factory installed:

- ▶ Comfort alert module⁽¹⁾
- ▶ Compressor monitor relay
- ▶ Flow proving switch
- ▶ Painted steel / no insulation (outdoor application CS only)
- ▶ Pump/valve relay
- ▶ Smart start⁽²⁾

Air handler section factory installed:

- ▶ .5" Closed cell foam insulation
- ▶ 2" MERV-13 filter
- ▶ 2" MERV-8 filter
- ▶ Blower current sensor

- ▶ DDC 560 Controller with multiple protocol (BACnet, Modbus, N2)
- ▶ DDC Controller with LonWorks card
- ▶ Electric heat - 5 kW⁽³⁾
- ▶ Electric heat - 10 kW⁽³⁾
- ▶ Electric heat - 15 kW⁽³⁾
- ▶ Electric heat - 20 kW⁽³⁾
- ▶ Energy Management System (EMS) relay
- ▶ Tin coated evaporator coil⁽⁴⁾
- ▶ Unit wire to 208 Volt

(1) Single phase units only.

(2) Voltage must be 208-230/1/60.

(3) Available on 208-230/1/60 and 208-230/3/60 units, top and end blow only.

(4) Aluminum fins are uncoated.



AHRI/ANSI 13256-1 PERFORMANCE DATA															
MODEL				WATER LOOP HEAT PUMP				GROUND WATER LOOP HEAT PUMP				GROUND LOOP HEAT PUMP			
				COOLING 86 °F		HEATING 68 °F		COOLING 59 °F		HEATING 50 °F		COOLING 77 °F		HEATING 32 °F	
CONDENSING SECTION	AIR HANDLER SECTION	GPM	LOAD	CAPACITY BTUH	EER BTUH/W	CAPACITY BTUH	COP	CAPACITY BTUH	EER BTUH/W	CAPACITY BTUH	COP	CAPACITY BTUH	EER BTUH/W	CAPACITY BTUH	COP
LM024-1CS	LM024-1AV	6	Full	23100	15.3	26400	5.2	28530	24.9	22200	4.5	26200	19.3	17700	3.8
			Partial	17200	16.8	19900	5.5	21600	32.7	16200	4.6	20000	26.4	13800	3.9
LM036-1CS	LM036-1AV	9	Full	36100	15	44100	5.1	40900	22.5	35200	4.5	37900	17.3	27400	3.8
			Partial	27000	17.9	32000	6.1	30600	30.2	25250	4.9	29300	25.4	22400	4.4
LM048-1CS	LM048-1AV	12	Full	46900	14.9	56800	5.3	52800	21.7	46600	4.6	48900	17.1	37800	3.9
			Partial	35600	18.2	40400	5.5	39400	30.3	34200	4.7	38400	26	30200	4.2
LM060-1CS	LM060-1AV	15	Full	56100	14.1	74500	5	64500	20.5	60500	4.4	58900	16.1	49000	3.8
			Partial	42800	16	54500	5.7	49600	27	44200	4.7	47900	23.3	39400	4.2
LM070-1CS	LM070-1AV	18	Full	65500	13.9	77700	4.5	74300	20.5	65700	4.1	68500	16	53200	3.5
			Partial	50400	15.4	58600	4.8	58200	26.3	48500	4.1	55800	22.2	43700	3.7

Note: Ratings based upon AHRI/ANSI 13256-1 with 1" disposable filter

EC Model | Water-to-Air Packaged Unit & Split System

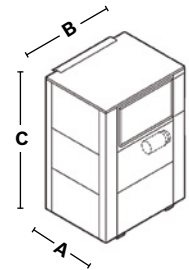
Large Capacity

Standard features:

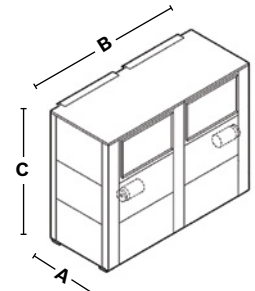
- ▶ Dual circuit (2-stage heat, 2-stage cool) with two compressors and belt drive fan
- ▶ Schrader access ports
- ▶ 1" C-Channel filter rack with 1" MERV-4 panel filter
- ▶ High and low pressure switches
- ▶ Condensate overflow sensor and lockout circuit
- ▶ Duct flange connections for the supply and return ductwork
- ▶ TXV expansion device
- ▶ Single point electrical and water connections - on package units only
- ▶ Unit Protection Module (UPM)
- ▶ Uncoated air coil made of copper tubes and aluminum fins
- ▶ Extended range (standard on horizontal sizes 072, 096, 120, 150; optional on horizontal 180, 242 and optional on all verticals)
- ▶ Stainless steel drain pan
- ▶ 75VA Transformer
- ▶ Refrigerant R-410A
- ▶ Galvanized steel cabinet
- ▶ 1/2", 1.5lbs/ft³ Dual density fiberglass insulation
- ▶ Dual refrigerant freeze sensors - water and air side



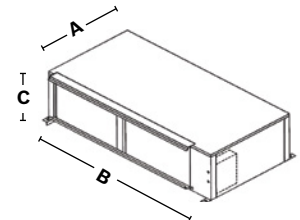
The EC Model water-to-air heat pump provides one of the best combinations of performance and efficiency available. Safety devices are built into each unit to provide the maximum system protection possible.



Single Blower
Large Vertical



Dual Blower
Large Vertical



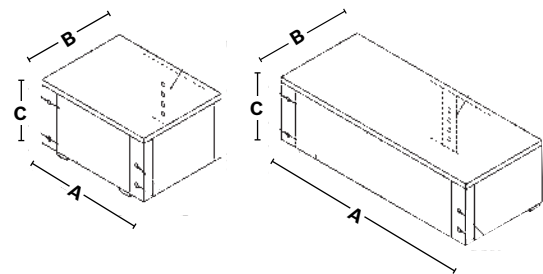
EC072-150
Large Horizontal

Notes: For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.
All dimensions in inches unless otherwise noted. All dimensions within +0.125". Specifications subject to change without notice. Height excludes mounting rails.

xxC - Copper coaxial condenser
xxN - Cupro-Nickel coaxial condenser

MODEL	SINGLE BLOWER LARGE VERTICAL UNIT DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)
EC072	42.00	32.00	62.00
EC096	42.00	32.00	62.00
EC120	42.00	32.00	62.00
EC151	52.50	32.00	70.00
EC181	52.50	32.00	70.00

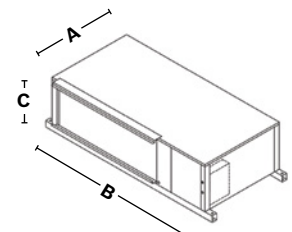
MODEL	DUAL BLOWER LARGE VERTICAL UNIT DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)
EC210	80.00	32.00	62.00
EC240	80.00	32.00	66.50
EC300	80.00	32.00	66.50
EC360	80.00	32.00	86.50



EC072-120 Split Systems
Condensing Section

EC150-360 Split Systems
Condensing Section

MODEL	LARGE HORIZONTAL UNIT DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)
EC072	38.00	78.00	21.50
EC096	38.00	78.00	21.50
EC120	38.00	78.00	21.50
EC150	42.00	82.00	21.50
EC180	60.25	106.50	25.25
EC242	60.25	106.50	36.00



EC180-242
Large Horizontal

Options | EC Model Packaged Unit & Split System

Factory installed:

- ▶ 1/2" Closed-cell foam insulation
- ▶ 100VA Transformer
- ▶ 2" Two-sided filter rack⁽¹⁾
- ▶ 2" Four-sided filter rack⁽¹⁾
- ▶ Blower monitor relay
- ▶ Blower rotate 180°
- ▶ Boilerless control
- ▶ Compressor blanket
- ▶ Compressor monitor relay
- ▶ DDC 560 Controller with multiple protocol (BACnet, Modbus, N2)⁽²⁾
- ▶ DDC with LonWorks card⁽²⁾
- ▶ DUOGUARD coated evaporator coil
- ▶ Energy Management System (EMS) relay
- ▶ Extended range (geothermal) (vertical unit)⁽³⁾
- ▶ Fan/pump interlock relay
- ▶ Fire alarm relay/dual power
- ▶ Flow proving switch
- ▶ Hot gas bypass

- ▶ Hot gas reheat - (on/off)⁽²⁾
- ▶ Hot gas reheat (modulating)⁽²⁾⁽⁴⁾
- ▶ Motor and drive packages
- ▶ Phase protection monitor⁽⁵⁾
- ▶ Series evaporator 100% OA⁽⁶⁾
- ▶ Straight cool
- ▶ Take apart construction
- ▶ Unit wiring for 208 Volt
- ▶ Variable frequency drive⁽⁷⁾⁽⁸⁾
- ▶ Water side economizer⁽²⁾

(1) Includes 1" MERV-4 air filter and access panel. For 2" field-supplied filters, remove spring clips prior to connecting return ductwork. Not available with economizer option.

(2) Requires 100 VA transformer.

(3) Standard on horizontal units except EC180-HZ and EC242-HZ.

(4) HGRH option does not include controls.

(5) 3-phase units only.

(6) Series evap 100% OA available only 6-30 verticals.

(7) Application of VFD requires the hot gas bypass option be added. Minimum airflow % of nominal is 50% cooling and 80% heating; higher airflows may be required depending on conditions. Voltage must be 208-230/3/60 or 460/4/60.

(8) This option is only available on 6-30 ton verticals.

MODEL	HORIZONTAL CONDENSING SECTION UNIT DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)
EC072	42.00	32.00	22.00
EC096	42.00	32.00	22.00
EC120	42.00	32.00	22.00
EC150	80.00	32.00	22.00
EC151	80.00	32.00	22.00
EC180	80.00	32.00	22.00
EC181	80.00	32.00	22.00
EC210	80.00	32.00	22.00
EC240	80.00	32.00	22.00
EC300	80.00	32.00	26.50
EC360	80.00	32.00	27.00

MODEL	VERTICAL AIR HANDLER UNIT DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)
EC072	42.00	32.00	41.00
EC096	42.00	32.00	41.00
EC120	42.00	32.00	41.00
EC150	80.00	32.00	41.00
EC151	80.00	32.00	41.00
EC180	80.00	32.00	41.00
EC181	80.00	32.00	41.00
EC210	80.00	32.00	41.00
EC240	80.00	32.00	41.00
EC300	80.00	32.00	41.00
EC360	80.00	32.00	61.00

MODEL	HORIZONTAL AIR HANDLER UNIT DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)
EC072	38.00	78.00	21.00
EC096	38.00	78.00	21.00
EC120	38.00	78.00	21.00
EC150	42.00	82.00	25.00

ASHRAE/AHRI/ISO 13256-1 – AHRI CERTIFIED

MODEL	GPM	WATER LOOP HEAT PUMP				GROUND WATER HEAT PUMP				GROUND LOOP HEAT PUMP			
		COOLING 86 °F		HEATING 68 °F		COOLING 59 °F		HEATING 50 °F		COOLING 77 °F		HEATING 32 °F	
		CAPACITY BTUH	EER BTUH/W	CAPACITY BTUH	COP	CAPACITY BTUH	EER BTUH/W	CAPACITY BTUH	COP	CAPACITY BTUH	EER BTUH/W	CAPACITY BTUH	COP
EC072	16	72000	13.0	92000	4.5	80400	18.6	72400	3.8	75600	14.2	54800	3.2
EC096	21	96000	14.0	116000	4.8	116000	20.6	93200	4.2	104000	15.4	73600	3.5
EC120	28	124000	13.2	158000	4.4	134000	18.3	123000	3.9	127200	14.7	100000	3.2
PERFORMANCE IN ACCORDANCE WITH ARI/ISO 13256-1													
EC150	35	157000	16.0	181000	5.6	185000	24.0	140000	5.0	166000	17.9	107000	4.2
EC151	35	147000	16.0	181000	5.6	175000	24.0	140000	5.0	155000	17.9	107000	4.2
EC180	42	182000	14.2	204000	5.0	195000	20.0	156000	4.2	185000	15.4	118000	3.5
EC181	42	170000	14.2	204000	5.0	185000	20.0	156000	4.2	175000	15.4	118000	3.5
EC210	50	220000	14.6	270000	5.1	292000	22.5	204000	4.5	250000	17.2	152000	3.9
EC240	60	248000	14.4	315000	5.0	310000	21.1	250000	4.5	275000	16.0	180000	3.9
EC242	60	248000	14.4	315000	5.0	310000	21.1	250000	4.5	275000	16.0	180000	3.9
EC300	75	295000	13.0	376000	4.2	365000	18.8	300000	3.8	318000	14.0	222000	3.2
EC360	90	386000	14.8	435000	4.2	472000	22.0	342000	4.0	412000	16.4	252000	3.3

CA Model | Console Unit

Standard features:

- ▶ Slope top powder-coated cabinet with .5" dual density matte-faced fiberglass insulation
- ▶ Dual schrader ports
- ▶ Unit includes complete chassis, unit sub-base, and unit cabinet
- ▶ Baked polyester coated air coil made of copper tubes and aluminum fins
- ▶ All CA -UXC units have CXC LED electronic temperature control
- ▶ Stainless steel drain pan
- ▶ All CA -RXX units have UPM control to utilize remote 24VAC thermostats and DDC wall sensors
- ▶ Dual Refrigerant Freeze Sensors - Water and Air Side
- ▶ Cleanable 3/8" Metal Mesh Air Filter
- ▶ .5" Copper SWT Connections (LH or RH)
- ▶ Powder-Coated Light Beige Cabinet, 48" Wide
- ▶ Extended Range with TXV and Insulated Copper Coaxial Heat Exchanger
- ▶ 40VA Transformer
- ▶ R-410A Refrigerant



Console units are available as CA models from 3/4 to 1 1/2 tons with a standard length of 48". Schools, apartment entrances, and other buildings can benefit from the Bosch Console unit. Its small size allows for installation in tight places and can be set up to bring in fresh outside air for better indoor air quality.

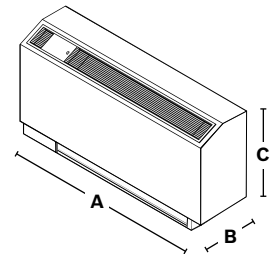
Notes: Full details of the warranty are included with the product at the time of sale and will be provided upon request.

All dimensions in inches unless otherwise noted. All dimensions within +0.125".

Fresh air opening (in sub-base rear).

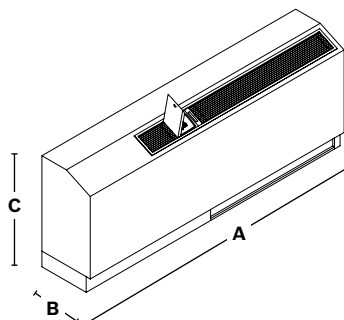
Caution! When installing unit in cold climates, an outside air damper must be provided to prevent possible condenser freeze-up.

MODEL	STANDARD LENGTH UNIT DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)
CA009	48.00	12.00	23.88
CA012	48.00	12.00	23.88
CA015	48.00	12.00	23.88
CA018	48.00	12.00	23.88

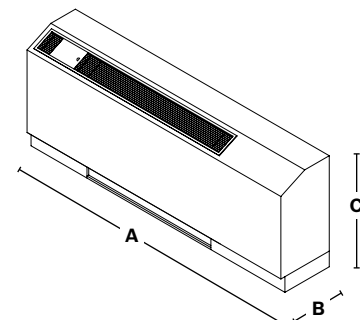


Right Hand Water Connections Standard Length

MODEL	EXTENDED LENGTH UNIT DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)
CA009	63.00	12.00	23.88
CA012	63.00	12.00	23.88
CA015	63.00	12.00	23.88
CA018	63.00	12.00	23.88



Left Hand Water Connections Extended Length



Right Hand Water Connections Extended Length

Options | CA Model Console Unit

Factory installed:

- ▶ .5 FPT Water connections (allows quick connect of hose kit)
- ▶ 75VA Transformer
- ▶ Blower monitor relay⁽¹⁾
- ▶ Cabinet extension to 63" (std. is 48" wide)⁽²⁾
- ▶ Chassis only (deducts painted cabinet and sub-base)
- ▶ Chassis with sub-base (deducts painted cabinet)
- ▶ Compressor monitor relay
- ▶ DDC 560 Controller with multiple protocol (BACnet, Modbus, N2)⁽¹⁾⁽³⁾

- ▶ DDC with LonWorks card⁽²⁾⁽³⁾
- ▶ Energy Management System (EMS) relay
- ▶ Fan/pump interlock relay
- ▶ Motorized outside air damper kit
- ▶ Non-fused disconnect switch
- ▶ Straight cool
- ▶ Unit wiring for 208 Volt

Notes: You must designate whether you need right or left hand by using the model nomenclature in the beginning section of this book. For example: ULC, RLC, SLC are all left hand models while URC, RRC, SRC are Right hand units.

xxC - Copper coaxial condenser
xxN - Cupro-Nickel coaxial condenser

Notes: Only use the options listed on this page for the console Unit.

For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.

Unit mounted controller controls only the unit it is installed on. It will neither control other units nor communicate to a building automation system.

- (1) Available on RXX only.
- (2) 63" Extended cabinet designed to enclose pump package. Pump package not included.
- (3) Requires 75 VA transformer.



AHRI/ANSI 13256-1 PERFORMANCE DATA

MODEL	GPM	WATER LOOP HEAT PUMP				GROUND WATER LOOP HEAT PUMP				GROUND LOOP HEAT PUMP			
		COOLING 86 °F		HEATING 68 °F		COOLING 86 °F		HEATING 68 °F		COOLING 77 °F		HEATING 32 °F	
		CAPACITY BTUH	EER BTUH/W	CAPACITY BTUH	COP	CAPACITY BTUH	EER BTUH/W	CAPACITY BTUH	COP	CAPACITY BTUH	EER BTUH/W	CAPACITY BTUH	COP
CA009	2.0	8700	13.4	9500	4.5	10300	21.5	8000	3.9	9100	15.5	6000	3.2
CA012	3.0	11700	12.7	12600	4.3	13700	19.8	11000	3.8	12200	15.0	8500	3.2
CA015	4.0	14300	12.9	16700	4.5	16900	21.4	13900	3.8	14700	14.9	11000	3.2
CA018	5.0	16900	12.2	20800	4.3	20100	18.2	17500	3.6	17900	14.2	13900	3.2

Notes: Ratings based upon AHRI/ANSI 13256-1 with 3/8" washable mesh filter.

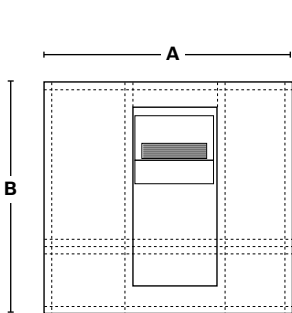
MC Model | Water-to-Air Packaged Unit

Standard features:

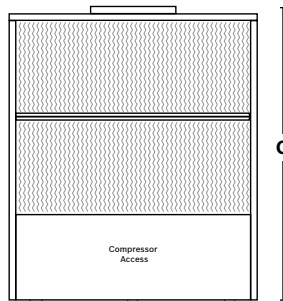
- ▶ Uncoated air coil made of copper tubes and aluminum fins
- ▶ VH (high-boy) and VL (low-boy) modular take-apart design
- ▶ Unit Protection Module (UPM)
- ▶ 4-Sided filter rack with 4" MERV-8 pleated air filter and access panel
- ▶ Painted steel drain pan
- ▶ TXV Expansion device
- ▶ Schrader access ports
- ▶ High and low pressure switches
- ▶ 100 VA Transformer
- ▶ Refrigerant freeze sensors on air and water-side
- ▶ Condensate overflow sensor protection
- ▶ Multiple circuit (2- or 4-stage heat, 2- or 4-stage cool) and belt drive inverter duty motor(s)
- ▶ Single-point electrical and water connections
- ▶ Galvanized steel cabinet
- ▶ .5", 1.5lbs/ft³ Dual density fiberglass insulation
- ▶ R-410A Refrigerant



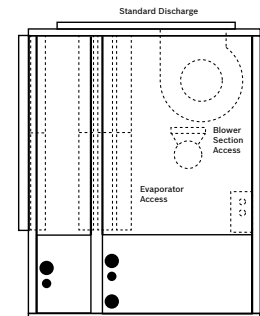
This large capacity water-to-air heat pump offers high efficiency, value added features and multi-levels of capacity with standard features like scroll compressors, variable air volume and 100% outside air capability giving you the flexibility, performance and quiet operation needed to exceed the expectations of your clients.



Top View



Rear View



Left Side View

MODEL	VERTICAL HIGH CONFIGURATION UNIT DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)
MC360	69.50	51.63	111.00
MC480	139.00	51.63	111.00
MC600	139.00	51.63	111.00
MC720	139.00	51.63	111.00

MODEL	VERTICAL LOW CONFIGURATION UNIT DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)
MC360	69.50	64.75	80.00
MC480	139.00	64.75	80.00
MC600	139.00	64.75	80.00
MC720	139.00	64.75	80.00

Notes: All dimensions in inches unless otherwise noted. All dimensions within +0.125". Specifications subject to change without notice. Height does not include 1.5" for the lifting support rails.

Options

MC Model Packaged Unit

Factory installed:

- ▶ .5" Closed-cell foam insulation
- ▶ Blower monitor relay
- ▶ Boilerless control
- ▶ Compressor monitor relay
- ▶ DDC 560 Controller with multiple protocol (BACNet, Modbus, N2)
- ▶ DDC 560 with LonWorks card
- ▶ DDC 6126 FLEX controller⁽¹⁾
- ▶ EMS Relay
- ▶ Extended range (geothermal)
- ▶ Fan/pump interlock relay
- ▶ Fire alarm relay/dual power
- ▶ Flow proving switch
- ▶ Hot gas bypass
- ▶ Hot gas reheat (on/off)⁽¹⁾
- ▶ Modulating HGRH⁽²⁾

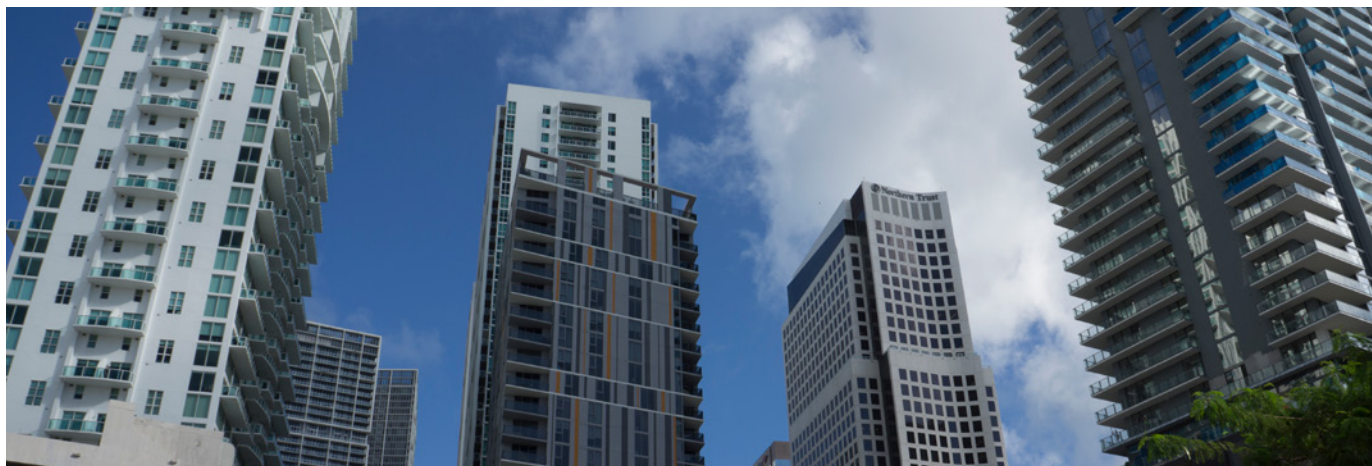
- ▶ Motor and drive package, 7.5 to 20 HP, dual motors and fans⁽³⁾
- ▶ Phase protection monitor
- ▶ Stainless steel drain pan
- ▶ Straight cool
- ▶ Variable frequency drive⁽⁴⁾
- ▶ Water-side economizer

Notes: All the MC360's ship in one section. All 480-720's ship in two sections. The VL will separate into two sections. The VH will separate into three sections. See MC catalog for shipping split information

Notes: For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.

xxC - Copper coaxial condenser
xxN - Cupro-Nickel coaxial condenser

- (1) For DDC control with on/off HGRH, MC360 requires the DDC 560, and MC480 through MC720 requires the 6126 FLEX controller with I/O flex expander 8160 kit
- (2) For DDC controls with modulating HGRH, MC360 requires the DDC 583 controller, and MC480 through MC720 requires the 6126 FLEX controller.
- (3) 480-720 only contain dual motors and fans, 360 size contains single motor and fan
- (4) Minimum fan speed percentage of nominal CFM: 50% for cooling and 80% for heating. Design conditions may dictate higher percentages. Voltage must be 208-230/3/60 or 460/4/60.



PERFORMANCE IN ACCORDANCE WITH ARI/ISO 13256-1 ISO CORRECTED (WITH FAN & PUMP POWER)

MODEL	GPM	CFM	WATER LOOP HEAT PUMP			
			COOLING 86° F		HEATING 68° F	
			CAP	EER	CAP	COP
MC360	90	12,000	395,246	13.1	475,212	4.7
MC480	120	16,000	555,796	16.1	622,608	5.2
MC600	150	20,000	642,387	15.4	751,701	5.4
MC720	180	24,000	790,649	13.1	950,439	4.7

Notes: The performance data results alter depending on application design; use Bosch Selection Tools software for specific performance data per the application, selection and specifications. <http://bst.fhp-mfg.com/eRep/>

WT Model | Water-to-Water 2-Stage Packaged Unit (Chiller/Boiler)

Standard features:

- ▶ 75VA Transformer
- ▶ Copeland Ultratech™ two-stage compressor
- ▶ Floating compressor base
- ▶ Schrader access ports
- ▶ Extended range with TXV and insulated copper coaxial condenser
- ▶ High and low pressure switches and lockout circuit
- ▶ Dual refrigerant freeze sensors
- ▶ Unit Protection Module (UPM) with control terminal strip In -CSC, -CSN models
- ▶ Remote control or unit mounted LED temperature controller
- ▶ Galvanized steel cabinet
- ▶ .5", 1.5lbs/ft³ Dual density fiberglass insulation
- ▶ R-410A Refrigerant

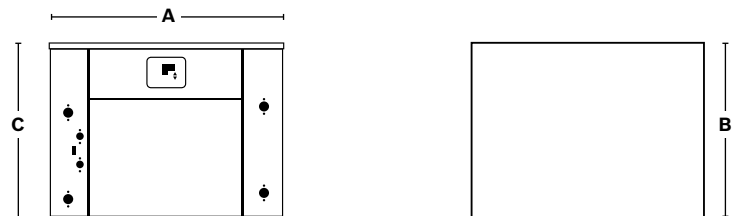


The WT Model is available in 2-6 tons, includes a wider range of voltages and optional double-wall load side heat exchanger. Also providing almost limitless options for hydronic systems due to its two-stage compressor and high operating temperatures for best-in-class performance.

Note: For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.

Note: CSN, USN CuNi on source side only.

xxC - Copper coaxial condenser
xxN - Cupro-Nickel coaxial condenser



Front View

Top View



MODEL	HORIZONTAL UNIT DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)
WT025	32.50	24.00	24.00
WT035	32.50	24.00	24.00
WT049	32.50	24.00	24.00
WT061	32.50	24.00	24.00
WT071	32.50	24.00	24.00

Note: All dimensions in inches unless otherwise noted. All dimensions within +0.125". Specifications subject to change without notice.

Options | WT Model Packaged Unit

Factory installed:

- ▶ 100VA Transformer
- ▶ Comfort alert diagnosis module⁽²⁾
- ▶ Compressor blanket
- ▶ Compressor monitor relay
- ▶ DDC Controller with multiple protocol (BACnet, Modbus, N2)⁽³⁾
- ▶ DDC with LonWorks card⁽³⁾
- ▶ Double wall water coil (load-side only)⁽⁴⁾
- ▶ Energy Management System (EMS) relay
- ▶ Flow proving switches⁽⁵⁾
- ▶ Heat recovery package⁽⁶⁾
- ▶ Load-side CuNi
- ▶ Phase monitor⁽⁷⁾
- ▶ Pump interlock relay
- ▶ Unit wiring for 208 Volt

- (1) Unit mounted controller controls only the unit it's installed on. It will neither control other units nor communicate to a building automation system.
- (2) Single phase only.
- (3) Only available on units with remote unit control (-CSC, -CSN)
- (4) A) Required for connecting WT directly to potable hot water loop.
B) 110 °F maximum leaving water at nominal water flow rate for heating.
C) Unit capacity will be reduced by approximately 5-10%.
D) Load side only.
- (5) Both water circuits.
- (6) Available on 208-230/1/60 and 208-230/3/60 units.
Comes with internal circulating pump.
- (7) Three phase units only.

Note: For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.

Note: CSN, USN CuNi on source side only.

xxC - Copper coaxial condenser
xxN - Cupro-Nickel coaxial condenser



ASHRAE/AHRI/ISO 13256-2. ENGLISH (I-P) UNITS															
MODEL	LOAD	SOURCE WATER FLOW RATE (GPM)	LOAD WATER FLOW RATE (GPM)	WATER LOOP HEAT PUMP				GROUND WATER HEAT PUMP				GROUND LOOP HEAT PUMP			
				COOLING 86 °F		HEATING 68 °F		COOLING 59 °F		HEATING 50 °F		COOLING 77 °F*		HEATING 32 °F**	
				CAPACITY BTU/H	EER BTU/W-H	CAPACITY BTU/H	COP	CAPACITY BTU/H	EER BTU/W-H	CAPACITY BTU/H	COP	CAPACITY BTU/H	EER BTU/W-H	CAPACITY BTU/H	COP
WT025	Part	6	5	15500	14.7	22000	4.6	18500	25.7	17000	3.7	18000	22.1	15500	3.1
	Full	6	5	21000	13.4	31000	4.4	24500	21.2	25000	3.6	22500	15.9	19500	2.8
WT035	Part	9	7	22500	14.5	31000	4.7	25500	24.5	25000	3.6	24000	20.6	22000	3.1
	Full	9	7	29000	12.6	43000	4.3	34000	20.2	34000	3.5	30000	14.5	27000	2.8
WT049	Part	10	8	29000	13.8	42000	4.5	33500	23.5	34500	3.8	32500	20.1	30500	3.2
	Full	10	8	39000	12.8	58000	4.1	45000	19.7	47000	3.6	41000	14.9	37500	2.9
WT061	Part	13	10	37000	14.2	55000	4.7	42500	23.3	41500	3.6	41000	19.8	36500	3.0
	Full	13	10	49000	12.9	74500	4.2	56000	19.9	59000	3.4	51000	14.8	44500	2.8
WT071	Part	15	12	43500	13.5	65500	4.4	50500	21.8	52000	3.5	48500	18.7	45000	3.1
	Full	15	12	57500	12.4	86500	4.1	64000	18.8	70000	3.4	60000	14.8	53000	2.9
WW120	Full	30	30	110100	13.5	160000	4.4	125000	19.2	129000	3.7	116000	15.5	106500	3.0
WW122	Part	30	25	54950	12.3	78600	4.2	63500	19.0	63600	3.4	61100	16.7	56300	3.2
	Full	30	25	114150	13.8	160800	4.6	130200	21.3	129800	3.8	119800	16.1	102700	3.0

Notes: The performance data results alter depending on application design; use Bosch Selection Tools software for specific performance data per the application, selection and specifications. <http://bst.fhp-mfg.com/eRep/> *For units with a part load rating temperature of 68° F. This applies only to ground loop condition. The other two conditions have the same water temp for full and part load conditions. **For units with a part load rating temperature of 41° F. This applies only to ground loop condition. The other two conditions have the same water temp for full and part load conditions.

WW Model | Water-to-Water 2-Stage Packaged Unit (Chiller/Boiler)

Standard features:

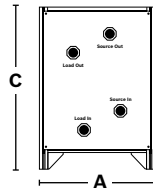
- ▶ Single refrigerant circuit (1-stage heat, 1-stage cool) (WW120, 180 and 210 only)
- ▶ Dual refrigerant circuit (2-stage heat, 2-stage cool) with two compressors (WW122, 240, 360 and 420 only)
- ▶ Schrader access ports, two per refrigerant circuit for service
- ▶ High and low pressure switches
- ▶ Unit Protection Module (UPM) with control terminal strip -CSC, -CSN models
- ▶ Dual refrigerant freeze sensors
- ▶ Unit mounted controller -USC, -USN models
- ▶ Single point electrical connections
- ▶ Galvanized steel cabinet
- ▶ 1/2", 1.5lbs/ft³ Dual density fiberglass insulation
- ▶ R-410A Refrigerant
- ▶ 100 VA Transformer
- ▶ Extended range with TXV and insulated copper coaxial condenser

Note: For units ordered with Cupro-Nickel coaxial heat exchanger, only the coaxial inner tube is CuNi; fittings and pipe are copper.

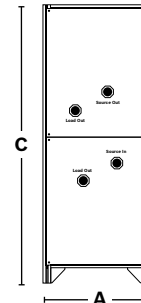
Note: CSN, USN CuNi on source side only.

xxC - Copper coaxial condenser
xxN - Cupro-Nickel coaxial condenser

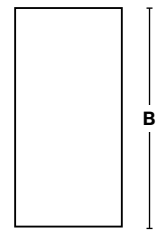
The WW Model is available from 10-35 tons. Including either a single-stage scroll compressor (WW120, 150, 180 and 210) or dual scroll compressors, two-stage refrigerant circuits for water-cooled modular reverse cycle chiller applications designed to meet all your needs and requirements.



Rear View
Models 120, 122,
180, 210



Rear View
Models 240,
360, 420



Top View



MODEL	UNIT DIMENSIONS (IN INCHES)		
	A (WIDTH)	B (DEPTH)	C (HEIGHT)
WW120	28.00	46.00	37.50
WW122	28.00	46.00	37.50
WW180	28.00	46.00	37.50
WW210	28.00	46.00	37.50
WW240	28.00	46.00	70.00
WW360	28.00	46.00	70.00
WW420	28.00	46.00	70.00

Options | WW Model Packaged Unit

Factory installed:

- ▶ Compressor blanket
- ▶ Compressor monitor relay
- ▶ CuNi on load side
- ▶ DDC Controller with multiple protocol
- ▶ (BACnet, Modbus, N2)⁽²⁾
- ▶ DDC with LonWorks card⁽²⁾
- ▶ Energy Management System (EMS) relay
- ▶ Fan/pump interlock relay
- ▶ Flow proving switches⁽³⁾
- ▶ Phase protection monitor⁽⁴⁾
- ▶ Unit wiring for 208 Volt

- (1) Unit mounted controller controls only the unit it's installed on. It will neither control other units nor communicate to a building automation system.
- (2) Only available on -CSC and -CSN units.
- (3) Both water circuits. Model must be CSX.
- (4) Three phase units only.



ASHRAE/AHRI/ISO 13256-2. ENGLISH (I-P) UNITS

MODEL	LOAD	SOURCE WATER FLOW RATE (GPM)	LOAD WATER FLOW RATE (GPM)	WATER LOOP HEAT PUMP				GROUND WATER HEAT PUMP				GROUND LOOP HEAT PUMP			
				COOLING 86 °F		HEATING 68 °F		COOLING 59 °F		HEATING 50 °F		COOLING 77 °F*		HEATING 32 °F**	
				CAPACITY BTU/H	EER BTU/W-H	CAPACITY BTU/H	COP	CAPACITY BTU/H	EER BTU/W-H	CAPACITY BTU/H	COP	CAPACITY BTU/H	EER BTU/W-H	CAPACITY BTU/H	COP
WW180	Full	34	27	127000	13.8	180500	4.5	143000	20.7	148500	3.8	132500	15.9	121000	3.2
WW210	Full	40	32	164200	13.2	239500	4.4	185500	19.1	194000	3.7	171500	15.1	156000	3.0
WW240	Full	56	44	222000	13.5	320000	4.4	249500	19.2	258500	3.7	232500	15.5	206500	3.0
WW360	Full	68	54	254000	13.8	361500	4.5	286500	20.7	297000	3.8	265000	15.9	242000	3.2
WW420	Full	80	64	328300	13.2	479000	4.4	370500	19.1	387500	3.7	343000	15.1	312000	3.0

Notes: The performance data results alter depending on application design; use Bosch Selection Tools software for specific performance data per the application, selection and specifications. <http://bst.fhp-mfg.com/eRep/> *For units with a part load rating temperature of 68° F. This applies only to ground loop condition. The other two conditions have the same water temp for full and part load conditions. **For units with a part load rating temperature of 41° F. This applies only to ground loop condition. The other two conditions have the same water temp for full and part load conditions.

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